Quality Control

Work Order II Friday, October 24, 20			*125	925*						Page 1	
Item ID: D350	01-1		Accept	*N900	040	100	ን * s	Setup Sta	rt *	S1*	
Revision ID:				1 4. 71 71 2	. , — . ,		•	Sto	о -1.1	O O +	
Item Name: Bushi	ng								, , /	S2*	
Start Date: 10/24	1/14 Start Qty: 160.00	· *160	N*	Cust Item 1	D:						
Required Date: 11/28	Req'd Qty: 160.00	^ր *160	N *	Customer:							
Reference:							•	C4	4		
Approvals: Proc	cess Plan:	Date: 14 10 2	Tooling:	D	ate:		ŀ	Run Sta	^ I <i>V</i> I	R1*	
QC:		Date:	SPC (Y/N):	D	ate:			Sto	_h *N	R2*	
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
Draw Nbr	Revision Nbr										
D3501	Rev A		•								
100			0.00				110			DAS	
100 Hardinge	Hardinge CNC LATHE Memo	SMALL	0.00				162			25 9-89	
Hardinge CNC Lathe Small	I 1-TURN A REV: <u>Ņ/∖</u> A	S PER FOLIO FA650 & DWG REV: \}	DWG D3501 ,FOLIO _ 2-DEBURR AS REQUIRE	ED						÷.	
110	QC2- Inspect parts off	machine FAI/FAIB	0.00				110			DAS 25	
110 QC	Memo		0.00				162			9-89	
Quality Control											
120	QC8- Inspect parts - se	cond check	0.00							DAS	
120			0.00				162	Ø		9-89 14/4/	
OC	Memo		0.00								

Memo

DQA:		_ Date:				_						TRAGE	
QA Closed:		Date:			WORK ORDER NON	-C(ONFO	RMANCE / U		Vork Order up	ndate only	AEROSPACE	
CA Closed.		Date.									, <u>, , , , , , , , , , , , , , , , , , </u>		
Work Orde	er:				DISPOSITION		AGAINST DEPARTMENT/PROCESS						
					Rework]		Skid-tube Crosstube		Water Jet		Engineering	
Part N	lo.				Scrap		Machining Small F			Pro	d. Eng. Coor.	Quality	
					Use-as-is		Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other	
NCR N	10				Suspected Unapproved	d Unapproved Large Fab Composite Su			Supplier				
Root	<u></u>	1		Desci	ription of work order update		Initial Action		Sign &				
Cause	Date	Step	Qty	Desci	or non-conformance)	ief Eng	1	cription	Date	 Verification	QC Inspector	
Design	- Dutte	Step	1 4.7		or non comornance	-	ilet eng	2030	прегоп	Butte	Vermeation	, de mapeeror	
Doc/Data													
Equip/Tooling													
Handling/Pre													
Material						ŀ							
Operator													
Offset/Setup						ŀ							
Process											:		
Supplier													
Training													
Transport			ĺ										
Unapproved								•					
.44,0						FAL	ULT CA1	EGORY					
Landir	ng Gear				General					_	_		
	Bendin	3			Bend		Folio/P	rogram		Outside Dim	ensions	Pressure/Forced	
	Centre	Not Conce	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up	
	Cracks				Broken/Damage/Defect		Hardwa	re		Part Incorred	t _	Temperature/Cure	
		(ink/Ripple	e/Wave		Burrs		Inspecti	on Incomplete/U	nqualified	Part Lost/Mi	ssing	Weld	
	Cuffs				Contamination	$\overline{}$	1	ions Incomplete/	Unclear	Part Moved		Wrong Stock Pulled	
	Crushin				Countersink		1	ned/off center		Positioned W			
	Heat Tr				Cut Too Short		Mislabe			Power Loss/	Surge	Other	
		on Strip in	Tube		Drawing		Misread	l					
	Marks/				Drill Holes		Off-set						
		Sequence			Finish		Out of Calibration						
	Wave/Twist in Tube Fit/Fun			Fit/Function		Out of Sequence							

Work	Order ID	125925

e 4

Work Ord Friday, October				*125	5925*						Page	2
Item ID: Revision ID:	D3501-1			Accept	*N900	040	100)* s	etup Sta	IV	S1* S2*	· ·
Item Name: Start Date: Required Date: Reference:	Bushing 10/24/14 11/28/14	Start Qty: 160.00 Req'd Qty: 160.00	*160 *160		Cust Item I Customer:	D:				"IN	5 /"	
Approvals:	Process Pl	an:	Date:	Tooling: SPC (Y/N):		ate:		R	un Star Sto	^ \	R1* R2*	
Sequence ID/ Work Center II)	Operation Description Identify as per dwg & Stoo	ck Location: Sto3SA	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	20 -6
130 Packaging Packaging		Мето		0.00				(62		NOV 157	2014	5¥@, - 90
140		QC21- Final Inspection - V	Work Order Release	0.00						14/1	1/17	A
140 QC Quality Control		Мето		0.00							MUF 11	- 14

DQA:			. Date:										
			5.			WORK ORDER NON	-C(ONFO	RMANCE /				AEROSPACE
QA Closed:			Date:						·		Work Order u	pdate only	
Work Orde	er:					DISPOSITION				AGAINST	DEPARTMENT	/PROCESS	
Part N	- No.					Rework Scrap	Skid-tube Crosstube Machining Small Fab			Pro	Water Jet od. Eng. Coor.	Engineering Quality	
	NCR No.				Use-as-is Suspected Unapproved	Thermoforming Finishi		Finishing Composite	Rec/Store/Packaging		Other		
Root					Desci	ription of work order update	1	Initial	А	ction	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	nief Eng	Des	cription	Date	Verification	QC Inspector
Design Doc/Data										· · ·			
Equip/Tooling													
Handling/Pre										,			
Material										•			
Operator					\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\								
Offset/Setup													
Process													
Supplier													
Training													
Transport													
Unapproved									·				
			·				FAL	ULT CA1	EGORY			L	
Landir	ng Ge	ar				General							
	В	ending				Bend		Folio/P	rogram	Γ	Outside Dim	ensions	Pressure/Forced
		entre No	t Concen	itric		BOM/Route		Grain			Over/Under	tolerance	Set-up
		racks				Broken/Damage/Defect		Hardwa	re	F	Part Incorred	 	Temperature/Cure
		rimp/Kin	k/Ripple,	/Wave		Burrs		Inspecti	on Incomplete/l	Unqualified	Part Lost/Mi	ssing	Weld
ŀ		uffs				Contamination	-	1	ions Incomplete	· · · · · · · · · · · · · · · · · · ·	Part Moved	Ī	Wrong Stock Pulled
		rushing				Countersink	П	Misalig	ned/off center		Positioned V	∟ Vrong	_
	_	eat Trea	t			Cut Too Short	-	Mislabe		f	Power Loss/		Other
	$\overline{}$		Strip in	Tube		Drawing	-	Misread		L	<u> </u>	·	
	_	i arks/Ch	· .			Drill Holes	-	Off-set					
	_		equence			Finish	_		Calibration				
	Wave/Twist in Tube				Fit/Function	-	Out of Sequence						

Picklist Print

Friday, October 24, 2014 2:18:00 PM

Work Order ID: 125925

125925

Parent Item:

D3501-1

D3501-1

Parent Item Name: Bushing

Start Date: 10/24/14

Required Date: 11/28/14

Page 4

Start Qty: 160.00

Required Qty: 160.00

Comments:

IPP Rev:A New Issue 06-05-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primary Item Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303R0.750		Purchased	No		100	f	74.6640	0.0791	14			
M303B0	75 ∩							**		· SI 14-	11-14	

ツバスロスHロ 750:

303 Round Bar 0.750

Location	Loc Qty	Loc Code	
MAT028	74.664		
m129366	1.294		
m130243	25.37		* 1.8
m130451	48		
130745			* 120

DQA:		_ Date:	·										
QA Closed:		Date:			WORK ORDER NON	-C(ONFO	RMANCE / UI		Vork Order u	ndate only	_	AEROSPACE
Q/ Closed		- Dute.	·										
Work Orde	er:				DISPOSITION				AGAINST E	DEPARTMENT/PROCESS			
					Rework			Skid-tube Crosstube			Water Jet		Engineering
Part N	١٥				Scrap			Machining	Small Fab	Pro	d. Eng. Coor.		Quality
					Use-as-is		Therr	noforming	Finishing	Rec/Sto	re/Packaging		Other
NCR N	10			— ·	Suspected Unapproved]		Large Fab	Composite		Supplier		
Root				Descr	ription of work order update		<u>l</u> Initial	Acti	ion	Sign &	Sign &		
Cause	Date	Step	Qty		or non-conformance	Ch	nief Eng	Descr	iption	Date	Verification	۱ ۱	QC Inspector
Design													-
Doc/Data					·								
Equip/Tooling													
Handling/Pre										İ		1	
Material											·		
Operator	_				•								
Offset/Setup						ļ							
Process													
Supplier	_												
Training	_												
Transport													
Unapproved													
						FAL	ULT CAT	regory					
Landir	ng Gear				General	_	1		_		r	_	
}	Bending			-	Bend	_	1	rogram	<u> </u>	Outside Dim	-	_	Pressure/Forced
		Not Conce	ntric		BOM/Route	_	Grain		1	Over/Under			Set-up
}	Cracks				Broken/Damage/Defect	<u> </u>	Hardwa			Part Incorred	-		emperature/Cure
		(ink/Ripple	e/Wave		Burrs	<u> </u>	1	on Incomplete/Un	· –	Part Lost/Mi	ssing		Veld
	Cuffs				Contamination		1	ions Incomplete/U	nclear	Part Moved	Ĺ	\	Wrong Stock Pulled
}	Crushin			-	Countersink	\vdash	1	ned/off center	. -	Positioned V			
	Heat Tr		T. ha	\vdash	Cut Too Short	\vdash	Mislabe		L	Power Loss/	Surge	IC	Other ·
}		on Strip in	rube		Drawing Drill Holos	$\vdash \vdash$	Misread	1					
}	Marks/			H	Drill Holes	\vdash	Off-set	5-111 -					
}		Sequence		\vdash	Finish	\vdash	ł	Calibration					
	Wave/Twist in Tube				Fit/Function	1	Out of S	Sequence					

DART AEROSPACE LTD	Work Order:	125925
Description: Bushing	Part Number:	D3501-1
Inspection Dwg: D3501 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X	First Article	Prototype

Drawing	Toloronos	Actual	A	Deiget	Method of	Comments
Dimension	Tolerance	Dimension	Accept	Reject	Inspection	Comments
0.850	+/-0.010	-851			ven	SL-16
0.060	+/-0.005	-061	/			
Ø0.750	+-0/0+0.008/-0.001	148				
Ø0.257	+0.005/-0.000	.258				
Ø0.472	+0.000/-0.002	1441			mic	SL-4
				,		
					, ,	

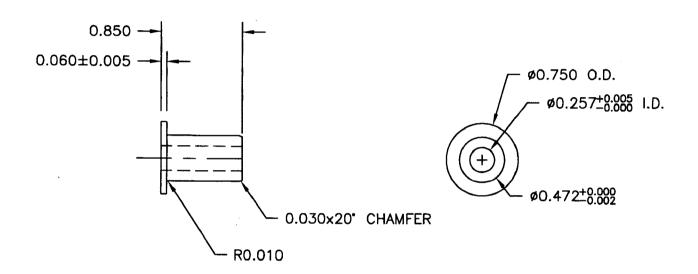
		DAS		
Measured by:	Audited by:	44 9-89	Prototype Approval:	N/A
Date: 14-11-13	Date:	14/11/11/1	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	06.10.27	New Issue	KJ/JLM	
				/ /

DQA:			Date:			MODE ODDED NON	c	ONICOI	30400CE / 11	IDDATE				***	DART
QA Closed:			Date:			WORK ORDER NON	-((JNFOI	RIVIAINCE / U		Νc	ork Order up	odate only		AEROSPACE
Work Order:				DISPOSITION		AGAINS			T DEPARTMENT/PROCESS						
Part N						Rework Scrap Use-as-is			Skid-tube Machining noforming	Crosstube Small Fab Finishing			Water Jet d. Eng. Coor. re/Packaging		Engineering Quality Other
NCR N	No					Suspected Unapproved			Large Fab	Composite		1100,0101	Supplier		
Root					Descr	iption of work order update		Initial	Ac	tion	Ī	Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	nief Eng	Desc	ription		Date	Verification		QC Inspector
Design	_					•									
Doc/Data	_														
Equip/Tooling	_														
Handling/Pre	_														
Material	_											4,			
Operator	_														
Offset/Setup	_														
Process	_												-		
Supplier	_			}		·					-				
Training	\dashv														
Transport	\dashv													ł	
Unapproved				l			<u> </u>	ULT CAT	ECORY					1	
l a sali:			 				FA	OLI CAI	EGORT	 					
Landi:	_					General Bend		ledia/n	roaram	Г	\neg	Outside Dies	: Г	\neg	Dunney / Formand
		nding	+ Camaan	.+-i.a	\rightarrow	D011/D		4	rogram	-		Outside Dim	}		Pressure/Forced
	Centre Not Concentric Cracks			ILLIC		· · · · · · · · · · · · · · · · · · ·	بسوب		Grain Hardware		-	Over/Under	⊢	$\overline{}$	Set-up
			k/Ripple	MAInes		Broken/Damage/Defect		1			⊣	Part Incorred	—	\dashv	Temperature/Cure
		•	KYKibbie	/ wave	\vdash	Burrs		1 `	on Incomplete/U	· · -		Part Lost/Mi	_	_	Weld
	Curting				-	Contamination Countersink		Instructions Incomplete/Unclear			_	Part Moved			Wrong Stock Pulled
	Crushing					Cut Too Short	-	Misaligned/off center			_	Positioned W			Othor
	Heat Treat Inspection Strip in Tube				Drawing	-	Mislabeled Misread		L		Power Loss/	ourge	1	Other	
		arks/Ch		rube	—	Drill Holes	\vdash	Off-set	I		-				
	_		equence			Finish	\vdash	1	Calibration		-				
			st in Tub		-	Fit/Function	-	1			-				
		ave/ i Wi	SCIII TUD	JE		rityrunction		Out of S	equence	•					



DESIGN DRAWN BY		DRAWN BY		ART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
CHEC	KED #	APPROVED ML	DRAWING NO.	REV. A			
	#	111	D3501	SHEET 1 OF %			
DATE		<u></u>	TITLE	SCAME			
06.04.18			BUSHING	1:1			
Α		06.04.18	NEW ISSUE				



D3501-1 BUSHING

- 1) MATERIAL: AISI 303 SS (REF DART SPEC. M303R)
- 2) FINISH: NONE
- 3) BREAK ALL UNMACHINED SHARP CORNERS 0.010 MAX
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES



